

WHAT IS CLAIMED IS:

1. A snap action switch which includes upper and lower nonsnap contacts, and which includes a snap action actuator having an actuation location and a tripping leg and a middle snap contact on the tripping leg, said middle contact lying between said upper and lower contacts and said middle contact being moveable between a down position against said lower contact and an up position against said upper contact, said actuator being constructed to snap said middle contact from said down position to said up position when said actuation location is depressed beyond a first snap height and to snap said middle contact from said up position to said down position when said actuation location is allowed to rise beyond a second snap height, comprising:

means for varying the height of one of said nonsnap contacts, to thereby vary one of said snap heights at which said middle contact snaps.

2. The switch described in claim 1 including:

a frame, said actuator having a resilient beam mounted on said frame to locate said actuator location in horizontal directions while allowing said actuation location to move vertically;

5 a cantilevered beam having a first beam end fixed to said frame, said upper contact being mounted on said cantilevered beam;

means for adjusting the height of a location on said cantilevered beam that is spaced from said first beam end.

3. The switch described in claim 1 including:

a frame, said switch being mounted on said frame;

a switch operator with an operator end lying directly over said actuation location, said operator end being moveable downward to depress said actuation location and being moveable downward;

5 a spring that has a first end that urges said operator end upward, said spring having a second end;

a nut that is threadably connected to said frame and that has a shoulder that engages said spring second end, said nut being turnable to move it toward and away from said spring first end to vary the spring force that must be overcome to move down said operator end to depress said actuation location.

4. A snap action switch comprising:

a frame;

an operator that is moveably mounted in said frame and that has an operator triggering end;

5 a spring that is mounted in said frame and that has a frame-abutting end coupled to said frame and an operator-abutting end coupled to said operator and urging said operator end upwardly;

upper and lower unsnap contacts mounted on said frame;

10 a snap action actuator having an actuation location lying immediately below said operator end, to be moved downward by said operator end, said actuator having a trigger leg with a middle snap contact thereon lying between said upper and lower contacts and moveable between a down position against said lower contact and an up position against said upper contact, said actuator constructed to snap said middle contact from said down position to said up position when said

actuation location is moved down beyond a first snap height, and to snap said middle contact from said up position to said down position when said actuation location rises beyond a second snap height, comprising:

means for fixing said upper contact at higher and lower positions relative to said lower contact, to thereby change the height at which said middle contact snaps down.

5. The switch described in claim 4 wherein:

said means for fixing includes a beam with a first beam location fixed to said frame, a second beam location that is spaced from said first locations with said upper contact being fixed to said beam at said beam second location, and a beam third location that is spaced from said beam first location, said means for fixing also including a screw that can be tightened to press down said beam third location.

6. The switch described in claim 4 wherein:

said frame has a fluid inlet, and including a membrane with a periphery fixed to said frame, and with a first membrane side exposed to said fluid and an opposite membrane side that applies force to said operator to urge said operator downwardly against said spring force;

5 said snap action actuator snaps said middle contact down against said lower contact when said operator moves upward beyond an upper actuation height (112), and said means for fixing adjusts the height of the said upper contact to adjust said upper actuation height.

7. A snap action switch arrangement that includes a frame with a fluid

inlet, a membrane mounted on said frame and having a first membrane side in communication with said fluid inlet to be deflected by fluid pressure and having an opposite second membrane side, an operator that is spring biased towards the membrane second side and that moves as the membrane is deflected, and a switch
5 that detects movement of the operator, the snap action switch arrangement including an M-blade actuator that has a middle contact and that has an actuation location, the actuation location being positioned to be deflected in a first direction by the actuator to cause the middle contact to snap from a position against a first
^{to a position ><} contact against a second contact and the actuation location being releaseable to
10 move in a second direction to snap the middle contact back against the first contact, including:

a screw coupled to said first contact to move said first contact toward and away from said second contact.

8. The switch arrangement described in claim 7 including:

a beam with a near end fixed to said frame, said first contact being mounted on a second beam location on said beam, and said screw is threadably connected to said frame and bears against a second beam location that is spaced
5 from said beam near end to deflect the beam.

9. A method for use with a snap action switch arrangement which includes a frame, an operator that is moveably mounted in the frame, a spring coupled to the operator and frame and biasing the operator in a downward direction, upper and lower unsnap contacts mounted on said frame, and a snap action actuator having an actuation location lying immediately below said operator to be moved downward by said operator, said actuator having a trigger leg with a middle snap contact thereon lying between said upper and lower unsnap contacts and

moveable between a down position against said lower contact and an up position against said upper contact, said actuator constructed to snap said middle contact from said down position to said up position when said actuation location is moved down beyond a first snap height, and to snap said middle contact from said up position to said down position when said actuation location rises beyond a second snap height, the method being useful to adjust said second snap height at which said middle contact snaps to said down position, comprising:

5 adjusting the height of said upper unsnap contact relative to said snap action actuator.